1.0 INTRODUCTION

1.1 The Watershed Management Initiative

The Watershed Management Initiative (WMI) is an integrated planning process in part designed to more effectively direct State and Federal funds to the highest priority water quality activities. Its distinguishing feature is the integration of the various regional, State, and United States Environmental Protection Agency (USEPA) programs on a watershed basis. The participating agencies in the WMI are the nine Regional Water Quality Control Boards (Regional Boards), the State Water Quality Control Board (State Board), and USEPA.

Implementation of the WMI is described in a document called the "*Integrated Plan for Implementation of the WMI*"(Integrated Plan), which is updated annually. The Integrated Plan is composed of individual chapters written by each of the nine Regional Boards, as well as chapters prepared by the State Board and USEPA.

The Santa Ana Chapter of the WMI Integrated Plan

This document is the Santa Ana Region's chapter of the Integrated Plan. It describes the Santa Ana Region's approach to watershed planning and serves as a tool for making budgetary decisions. The Santa Ana Region's chapter implements the WMI by:

(1) Compiling existing water quality programs organized on a watershed basis (Sections 1, 2, 3, and 4),
(2) Presenting region-wide priorities for grant projects, and priority projects and project needs. Both high and low priority projects and project needs are listed. This information is intended to guide potential grant applicants toward projects and project needs that are aligned with Board priorities and watershed needs identified by staff and stakeholders (Section 2 with tables),
(3) Discussing program activities (Section 3),
(4) Describing *Region-wide* water quality programs, including short-term and long-term goals and resource needs (**Section 4**).
(5) Providing detailed watershed program schedules and budgets (**Appendices**).

The remainder of this introduction provides a brief description of the Santa Ana Region (**Section 1.2**), an overview of Regional Board activities (**Section 1.3**), and a brief description of the designated watershed management areas in the Santa Ana Region (**Section 1.4**).

1.2 The Santa Ana Region

The Santa Ana Region covers an area of approximately 2,800 square miles in Southern California. The Santa Ana River Basin makes up most of the Region (**Figure 1-1**). While it is the smallest of the nine water quality control regions in the State, the Region contains a wide variety of water resources, including mountain streams and lakes, coastal estuaries and beaches, effluent-dominated rivers, and intensively used and managed groundwater basins.

Boundaries:
The San Gabriel, San Bernardino, and San Jacinto Mountains form the northern, northeastern, and eastern boundaries of the Region. The western boundary of the Region conforms to the Los Angeles County line. Portions of the Santa Ana Mountains, the San Joaquin Hills, and the Pacific Ocean coastline form the southern boundary of the Region. The Region includes ocean coastal waters, from the mouth of the San

Gabriel River and Seal Beach to Crystal Cove State Park and Muddy Canyon, northwest of Laguna Beach. The two coastal embayments in the Region are Newport Bay and Anaheim Bay/Huntington Harbour.

Water Bodies:
The Santa Ana Region contains six types of waterbodies for which beneficial uses have been identified (Water Quality Control Plan for the Santa Ana River Basin ["Basin Plan"] 1995).

Ocean Waters. The Pacific Ocean coast between Muddy Canyon in the south and the San Gabriel River in the north is included within the Santa Ana Region. Two areas in the nearshore zone have been designated as State Water Quality Protection Areas (SWQPAs; formerly Areas of Special Biological Significance) and have been further designated with associated coastal land and watershed as Critical Coastal Areas (CCA). These are the Newport Beach Marine Life Refuge Area (CCA #70) and the Irvine Coast Marine Life Refuge Area (CCA #71).

Bays, Estuaries, and Tidal Prisms. Eleven bays, estuaries, and tidal prisms are recognized along the coast. The largest of these are Anaheim Bay and Newport Bay (Upper Newport Bay is also designated as Critical Coastal Area #69). The Bolsa Chica Ecological Reserve and the Seal Beach National Wildlife Refuge are included in this category.

Inland Surface Streams. The two major surface streams in the Region are the Santa Ana and San Jacinto Rivers. The Santa Ana River and its principle tributaries arise in the south- and southwest- facing portions of the San Bernardino Mountains, the south- and southeast-facing portions of the eastern San Gabriel Mountains, and the south- and southwest- facing portions of the Santa Ana Mountains, and drain the San Bernardino Valley, Chino Basin, and the central part of Orange County. The San Jacinto River and its principle tributaries arise in the south- and southwest-facing portions of the San Jacinto Mountains, and drain the Perris Valley and surrounding lands to Lake Elsinore. Lake Elsinore discharges to the Santa Ana River, via Temescal Creek.

Lakes and Reservoirs. Seventeen lakes and reservoirs are located within the Region. Twelve of these occur within the Santa Ana River watershed, while the remaining five, including the largest natural freshwater lake in Southern California (Lake Elsinore), are found within the watershed of the San Jacinto River.

Wetlands. The Santa Ana Region has numerous wetlands within its boundaries. Although the Basin Plan specifically identifies ten of the larger wetlands, all wetlands are protected.

Groundwater. Some forty groundwater basins have been delineated within the Santa Ana Region. Groundwater constitutes a large portion of the water supply for many municipalities and agricultural operations in the Region.

1.3 Overview of Regional Board Activities

The Santa Ana Regional Board manages a variety of programs to protect water quality and beneficial uses. Eight of the Regional Board's water quality protection activities are currently incorporated into the WMI. These are:

1. Watershed Management (Coordination)
2. Water Quality Standards/Basin Planning
3. Monitoring and Assessment
4. Non-point Source (NPS)
5. Total Maximum Daily Loads (TMDLs)
6. Core Regulatory (NPDES, Waste Discharge Requirements [WDRs], and Chapter 15 WDRs)

7. Wetlands Protection/Regulation
8. Groundwater Protection/Clean-up

The eight programs are discussed on a WMA-specific basis in **Section 3**. Region-wide activities for each program are discussed in **Section 4**.

Total Maximum Daily Loads (TMDLs)
The Basin Plan for the Santa Ana Region specifies water quality objectives for each water body according to water type. The water quality objectives are intended to provide reasonable protection for the beneficial uses listed for each water body (Basin Plan, 1995).

In 1998, the Regional Board designated a list of 26 water bodies for which water quality standards (beneficial uses and/or water quality objectives) were not being attained. The list also includes a description of the pollutant(s) causing impairment. This list, developed in accordance with Section 303(d) of the Clean Water Act (CWA), is referred to as the "303(d) list" and updated every two years. The 303(d) list of waters in the Santa Ana Region is available at:
http://www.waterboards.ca.gov/tmdl/docs/2002reg8303dlist.pdf

The Regional Board is required to establish numeric water quality targets for each waterbody on the 303(d) list. These targets are referred to as Total Maximum Daily Loads (TMDLs). The TMDL is the maximum load of a pollutant that can be discharged into a waterbody without impairing water quality standards. TMDLs are discussed further in **Sections 3 and 4**. Further information about TMDLs in the Region can be found at: http://www.waterboards.ca.gov/santaana/html/tmdls.html

1.4 Watershed Management Areas

The Santa Ana Region is too large and complex to be managed as a single watershed, and it has therefore been divided into ten Watershed Management Areas (WMAs; 2004 revision). The ten WMAs are:

1) Mountain
2) Big Bear Area
3) Upper Santa Ana River
4) Middle Santa Ana River
5) Lake Elsinore, San Jacinto River
6) Lower Santa Ana River
7) Coyote Creek & Carbon Creek
8) Newport Bay (including Upper Newport Bay, CCA # 69)
9) Anaheim Bay, Huntington Harbour, Bolsa Chica
10) Newport Coast (including Newport Beach and Irvine Coast Marine Life Refuge Areas, CCAs #70 and 71, respectively)

These 10 WMAs are based on the component sub-watersheds of the Santa Ana Region, and are being used as the basis for watershed planning and directing resources. The WMAs in the Santa Ana Region are shown in Figure 1-1 and each WMA is described in detail in Section 3.

Two of the Regions WMAs include Critical Coastal Areas (CCAs). The Plan for California's Nonpoint Source Pollution Control Program includes requirements designating CCAs, the watersheds tributary to sensitive coastal resources. CCAs in Region 8 have been selected from coastal lands adjacent to State Water Quality Protection Areas (SWQPAs; formerly Areas of Special Biological Significance), or adjacent to Clean Water Act Section 303(d) impaired waters that flow into Marine Managed Areas. The intent of the CCA designation is to direct needed attention to coastal areas of special biological, social, and

environmental significance and to provide an impetus for these areas to receive special support and resources. These areas include Environmentally Sensitive Habitat Areas (ESHAs) currently designated in California's Coastal Zone Management (CZM) program, California's National Estuarine Research Reserves (NERRs), National Estuary Program (NEP), and National Marine Sanctuaries. More information on the CCA Program can be obtained from the Coastal Commission's website at http://www.coastal.ca.gov/nps/cca-nps.html.

The water quality issues that have been identified for each WMA and priority Regional Board activities are listed in **Table 1-1**.

Stakeholders may use the Regional Board's WMI chapter as a tool to guide them toward water quality projects that mutually benefit their watershed interests and the region as a whole. The relative water quality importance and priority of a nascent project can be inferred from the watersheds discussions, tables, and appendices in this WMI chapter. Tables in Section 2 (Tables 2, 2-1, and 2-2) and in the appendices include lists of projects and project needs that would benefit the watershed of the region. Board staff, with the concurrence of the Regional Board, has identified regional priorities for grant funded-projects, and preferences that will add additional value to grant project proposals that help to address regional priorities. These priorities and preferences are shown on Table 2. Highlighted projects and project needs shown in Tables 2-1 and 2-2 are those that are linked to a regional priority. The priority list will be used by stakeholders to help them develop grant proposals that address regional priorities, by staff to weight and rank grant proposals, and by senior staff/management to recommend that grants be awarded to the most worthy projects.

SWRCB-administered grant programs, funded with state bonds and federal grants, are placing increasing emphasis on awarding funds to projects that implement recognized regional plans, regional priorities, and the WMI. Proposals for grant projects that incorporate a WMI-listed project or project need chapter and a regional water quality priority are more likely to receive grant funding than those that do not. Projects from an approved watershed plan (which include the Basin Plan and TMDLs) that are also WMI listed and address a regional priority will rank still higher in the competitive grant selection process.

Table 1-1: Priority Activities in Watershed Management Areas

Watershed Management Area	Primary Water Quality Concerns	Priority Regional Board Activities
Middle Santa Ana River	TDS and TIN levels, contaminant plumes in groundwater. Bacterial quality of surface waters. Impacts from confined animal feeding operations.	TDS and TIN amendments to Basin Plan. Participation in the Nitrogen/TDS task force. Implementation of the dairy regulatory program. Development of TMDLs for nutrients, pathogens, and suspended solids. Investigation of perchlorate contaminant plumes in groundwater. Participation in Storm Water Quality Task Force evaluating application of REC1 beneficial use to inland waterways.
Newport Bay	Excess algal blooms (nutrients), aquatic life toxicity, bacterial quality; stream channel erosion and sedimentation in Newport Bay, wetland protection, Upper Newport Bay designated as Critical Coastal Area	Implementation of sediment, nutrient, and fecal coliform TMDLs, and development of TMDLs for diazinon and chlorpyrifos, selenium, and other toxic constituents (metals, pesticides and priority organics). Participation on Serrano Creek restoration projects. Coordination with Critical Coastal Areas Committee for Upper Newport Bay (CCA # 69).
Lake Elsinore, San Jacinto	Summer lake algal blooms and fish kills, bacterial quality, lake water level management, nitrogen and TDS in groundwater, impacts from confined animal feeding operations	Development of TMDLs for nutrients, siltation, pathogens, and unknown toxicity. Implementation of the watershed-wide NPDES permit (Order No. 01-34) for the San Jacinto watershed. Participation with local agencies on management projects for Lake Elsinore
Anaheim Bay, Huntington Harbour, Bolsa Chica	Toxic constituents (metals, pesticides, and petroleum products), wetland protection and restoration, bacterial quality	Water quality assessment monitoring in Anaheim Bay and Huntington Harbour, and at candidate toxic hot spot sites. Implement waste discharge requirements for sewage collection agencies to prevent system overflows and protect beach water quality.
Big Bear Area	Excess sediments and nutrients, toxic constituents (metals), protection of endangered plant and animal species	Development of TMDLs for nutrients, metals, siltation, and pathogens.
Mountain	Wastewater disposal problems (septic tanks), changes in watershed ecology due to drought and fire	Enforcement activities related to septic tank system prohibitions. Developing strategies for monitoring water quality in discharges from drought- and fire-impacted watersheds.
Upper Santa Ana River	Wastewater reclamation (TDS and nitrogen issues), groundwater recharge and water level management, invasive plant eradication	Santa Ana River monitoring at Prado Dam. Participation in the Nitrogen/TDS task force. (See Middle Santa Ana River for Santa Ana River Reach 3 TMDL activities). Participation in Storm Water Quality Task Force evaluating application of REC1 beneficial use to inland waters.
Lower Santa Ana River	Bacterial quality, groundwater TDS and nitrogen, coastal wetlands protection, wastewater reclamation, organic contamination	Participation in the Nitrogen/TDS task force. Review of ocean monitoring programs in conjunction with Orange County Sanitation District, Southern Calif. Coastal Water Research Project, et al. Participation in Southern Calif. Wetlands Recovery Project. Implementing municipal separate storm sewer system NPDES permit for County of Orange. Participation in Storm Water Quality Task Force evaluating application of REC1 beneficial use to inland waterways.
Newport Coast	Discharge of wastes to two State Water Quality Protection Areas (Newport Beach, Irvine Coast) that are also Critical Coastal Areas	Prevention of discharges to ASBS / SWQPA sites through monitoring, implementation of Cease and Desist Order. Manage contract for restoration of Buck Gully. Coordination with Critical Coastal Areas Committee for Newport Beach Marine Life Refuge (CCA # 70) and Irvine Coast Marine Life Refuge (CCA # 71).
Coyote Creek, Carbon Creek	Nitrogen impairment, channel erosion and aquatic habitat degradation	Development of watershed management plan

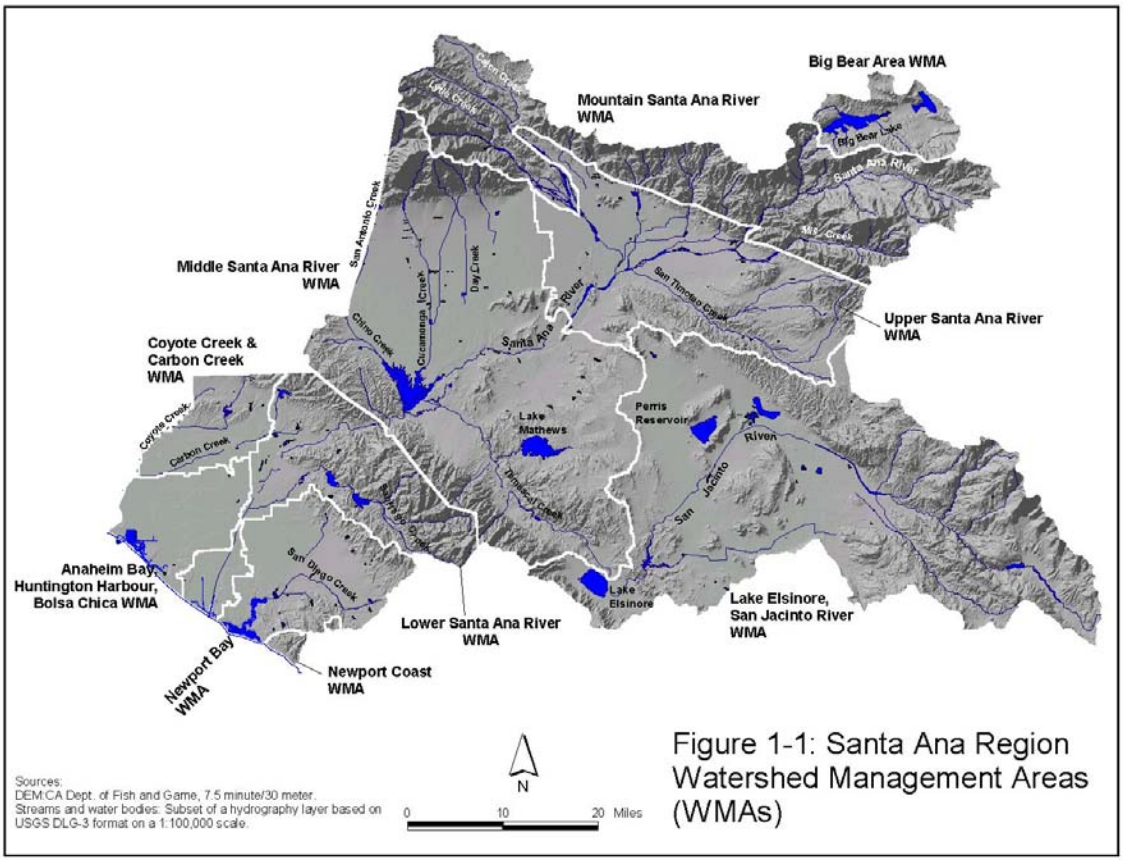

Figure 1-1: Santa Ana Region Watershed Management Areas (WMAs)